DECEMBER 1952

FIREMEN

FIFTY-SEVENTH YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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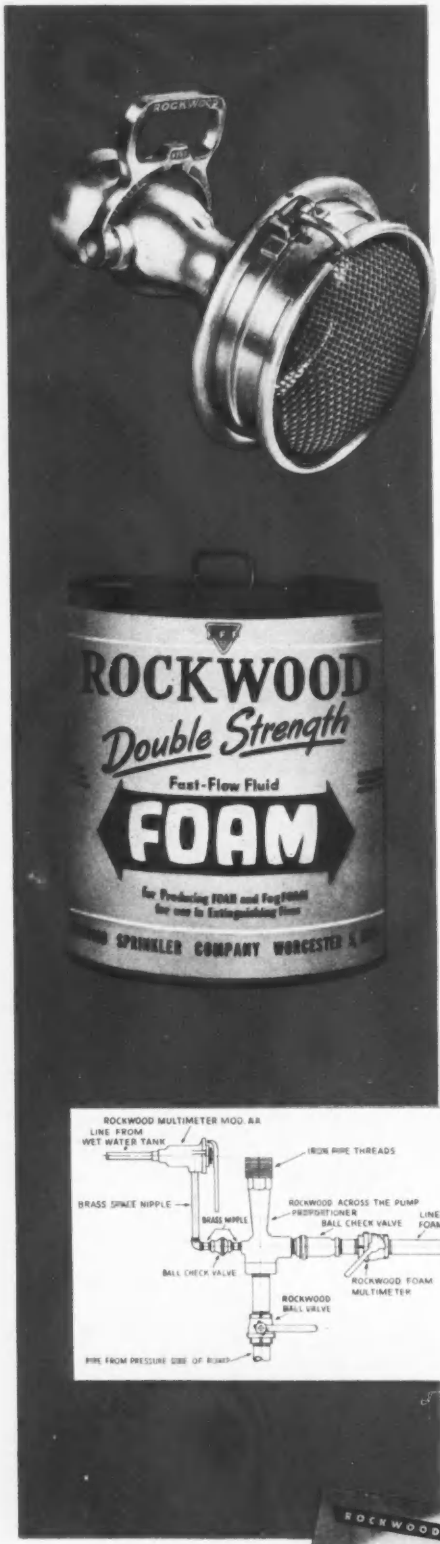

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Nozzle provides three different discharges . . . FogFOAM with *screen* (shown), solid FOAM stream with *foam shaper* (not shown), and/or high-velocity WaterFOG by shutting off FOAM liquid. Through Fog-FOAM screen, 2½" size discharges 200 gpm @ 100 psi. Range: approximately 30 feet. Approved by Underwriters' Laboratories, Inc.

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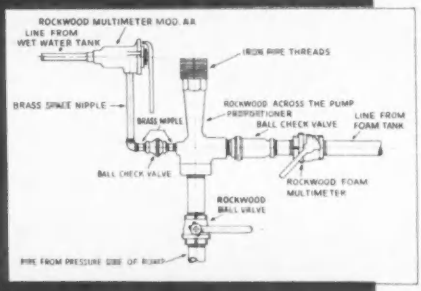

ROCKWOOD MODEL DUAL "B" AROUND-THE-PUMP PROPORTIONER automatically feeds FOAM liquid or wetting agent into hose lines. Eliminates waste, assures accurate mixing. Used when pressure is maintained by a pump from draft supply or booster tank. Operates in range from ¾" booster lines to 2½" hose lines.

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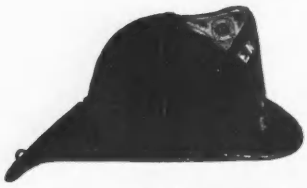

No. 5A — "NEW YORKER"
(Leather)

No other helmet made has ever shown the rugged stand-up-ability of this "pioneer" of all "regulation" helmets — which explains why it is first choice in the largest departments, where the duty is hardest.

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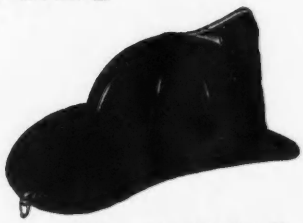
(Aluminum)

Where the preference is for aluminum, here is a rugged one-piece "regulation" helmet that is light, durable, safe and comfortable — and largely used by both regulars and volunteers, the country over.



No. 900 — "CLIFTON"
(Flint-Flex)

"Regulation" in every line, this latest CAIRNS Helmet is made of "Flint-Flex" — a light, tough, flexible, plastic material that gives complete protection against impact, heat, electric current and chemicals.

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A feather-weight helmet with specially formed double-thick crown giving solid support to the front piece. The drop brim gives extra protection for eyes, ears and back of neck.

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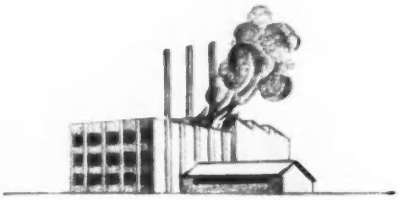
INTANGIBLE LOSSES



can take a greater toll!

When a business suffers a serious fire, insurance usually compensates for the *tangible* losses. It's the *intangible* losses that really hurt—and fire records show that in many cases they take an even greater toll!

Intangible assets either cannot be or seldom are insured, yet they can go up in smoke just as easily as your tangible assets. Your surest protection against such losses is to safeguard your tangible assets against destruction by fire.

Thousands of concerns throughout the United States have taken this precautionary action through use of ADT Central Station Fire Protection Services to detect and report fires *automatically* before they can reach dangerous proportions.

May we explain how these services can be applied to protect your property and profits?

ADT

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A Nationwide Organization

Firemen

Volume 19 — Number 12

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NATIONAL FIRE PROTECTION ASSOCIATION

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Contents for December 1952

	Page
Philadelphia's New Fire Training School, by Deputy Fire Commissioner Paul B. Hartenstein	8
Fires in the News	9
Pumping Through a Well Point	10
Christmas Publications	10
Grain Elevator Fire	10
Fire Protection School — Oklahoma A & M	10
Signals for Volunteers	10
Fire Department of Upper Darby Township, Pa.	11
Training a Municipal Fire Department, by Deputy Chief C. L. Scott, Memphis, Tenn., Fire Department	12
Techniques of Artificial Respiration — Conclusion, by Dr. William S. Claudy	14
Group Training in Fire Department Administration, by Orin S. Nolting, ICMA	16
Rhode Island Firemen Salute Willard Hall	17
New Film on London Blitz Fires	17
The Fireman's Law Book	18
Fairborn, Ohio, Emergency Bus	22
Does Your Fire Department Sponsor a Boy Scout Troop?	23
"Rescue and First Aid Digest"	24
British Fire Research, 1951	24
Bear Barely Escapes	26
Membership Report	28
What's New in Fire Equipment?	30
Index to Advertisers	30
Index to FIREMEN — 1952	31

Cover Picture

"Sparky," the Dalmatian firehouse dog, deserves his position of prominence on this month's cover. Not only does he express the holiday greetings of the NFPA staff to all readers of FIREMEN, but he also has become a national figure in the field of public education in fire prevention through the campaign sponsored by the NFPA in cooperation with The Advertising Council. (See June, 1952, FIREMEN.)

"Sparky's" greetings could be a reality for everyone, but the odds are against it. Past records indicate that a fire-safe Christmas will remain beyond attainment for many people. Last year during the holiday season there were 1,200 fires involving Christmas trees. A duplicate amount occurred in the holiday season of 1950.

Perhaps this year everyone will do his part to minimize the loss from fire during the holidays. Perhaps "Sparky's" wishes will come true. We sincerely hope that they do.

"Fire Safety in the Atomic Age"

We mention this book by Chief Engineer Bond and published by NFPA because its full significance may have been overlooked by many persons in the fire service. This book is not primarily about A-bombs. It is a basic, interesting, easy to read text covering the fundamentals that must be understood in order to provide fire safety in any modern community, regardless of whether that community is a large metropolitan center that might be an A-bomb or H-bomb target or a small, isolated, or suburban community or an industrial occupancy. The fundamentals that will produce a relative degree of fire safety in time of war are those good practices that can make your community safe from fire at any and all times.

The discussion of such basic matters as fire loading, occupancy, compartmentation, and the part that various types of construction play in the fire problem must be understood if any community is to be reasonably safe from fire. No person is better qualified to write or speak on the effects and significance of fire in war or peace than NFPA Chief Engineer Horatio Bond. The text was prepared as a monograph on "Building in the Atomic Age" for the Massachusetts Institute of Technology. The book "Fire Safety in the Atomic Age," 84 pages, profusely illustrated, $3.00 per copy, is one of the significant fire protection publications of 1952. (See back cover.)

Firemen's Weak Point

A group of fire fighters in one of the larger departments are currently being questioned and submitted to "lie detector" tests because a sum of money is alleged to have been taken while they were fighting a fire in private dwelling. According to newspaper reports these men were "ordered" to submit to examination by lie detector and to other questioning which they have claimed to be an infringement of their constitutional rights.

The situation highlights the vulnerability of fire fighters to accusations by property owners. During the rapid action and excitement that accompanies a fire in a home, or in an industrial building, property can be lost, damaged, or even stolen. Frequently fires are set to cover theft. Fire fighters in the performance of their civic duty must move throughout the building to fight the fire, to make inspections, or to perform salvage work. They are proud to perform such duty honorably and to respect the owner's property, whether it be cash, clothing, or other belongings.

However, when an unfounded or unscrupulous charge is made fire fighters must be able to verify their actions. For this reason, whenever fire fighting or inspection duties require fire department members to enter any occupancy, the work should be done by pairs or larger groups. Then their actions can be verified more substantially by the testimony of the accompanying teammember or members. The testimony of two or more persons will carry more weight than that of an individual who is subject to criticism or accusation. And, in addition to saving a fire fighter's honor against erroneous charges, the presence of a partner in fire fighting operations might also mean the saving of one's life.

Philadelphia's New Fire Training Center

From a report by Deputy Fire Commissioner Paul B. Hartenstein of Philadelphia, Pennsylvania.

SHOWN above are two views of the new Fire Training School opened by the Philadelphia, Pa., Fire Department on October 7, 1952. Mayor Joseph S. Clark, Jr., presided over special dedication ceremonies. The school, one of the largest buildings ever built for the Fire Department, takes the place of the original Fire Training School which was in the rear of Engine Company No. 23 at 2013 North 7th Street.

The new building, located at Ridge Avenue and Cinnaminson Street in the Roxborough section of Philadelphia, is combined with headquarters for Engine Company No. 39, Truck Company No. 30, the Fire Department Motor School, and the Station House for the Fifth Police District. It was completed in time for Fire Commissioner Frank L. McNamee to schedule the dedication as one of the major projects of Philadelphia's Fire Prevention Week activities.

The training school has a five-story drill tower with a smoke chamber and wet and dry sprinkler systems, open grille stair cases, outside fire escapes, brick and wooden window sills for ladder training, and various types of roof copings.

In the yard area are high and low pressure fire hydrants and a 750-gallon water storage tank for instructional and drill operations in water drafting. Classrooms for groups of 25 to 100 trainees and a library of fire fighting publications are on the second floor.

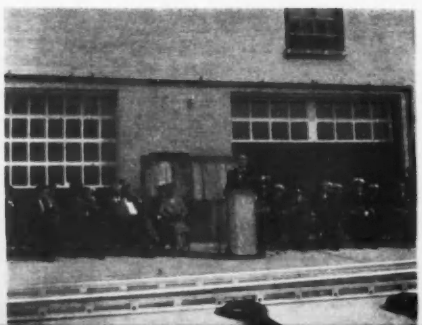
There is also a 60-ft. hose tower for use by the fire companies stationed at the school for training. Modern dormitories with locker, lounge, and washroom facilities are also included in the building.

The new training center, covering an area of 167 by 290 feet, will provide space for training fire department members in combating industrial and residential fires in addition to training in controlling incendiaries and other fire fighting for civil defense.

TWO of Philadelphia's fire companies have already been ordered to the school for intensive refresher courses. Engine Company No. 6 and Truck Company No. 7 will be completely relieved from fire fighting duties and will transfer all personnel and equipment, including a triple combination pumper and an 85-ft. ladder truck, to the two fire stations at the training center.

The three platoons of each company will receive forty hours of instruction in coordinated operations of engine and truck companies. Instruction will include lectures on new types of hazards brought about by the development of the Philadelphia port facilities and the expansion of defense industries in the area. Training evolutions will cover the use of pumpers at draft to make use of the port and rivers for water supply, hose and ladder evolutions, use of high pressure water systems, training of drivers and tillermen, and rescue operations. There will also be instruction in the use of sprinkler systems and water curtains. A year-round training program is planned which will permit rotation of fire companies for the week-long training courses.

(Below, left) Portion of the crowd of 2,000 people who attended the dedication ceremonies of Philadelphia's new Fire Training School. (Center) Mayor Joseph S. Clark, Jr., speaks at the dedication. On the platform in the front row (left to right) are: City Councilman Paul D'Ortona, Deputy Fire Commissioner Paul B. Haretenstein, City Managing Director Robert K. Sawyer, City Councilman Constance Dallas, Mayor Clark, Fire Commissioner Frank L. McNamee (behind Mayor), Police Commissioner Thomas J. Gibbons, Deputy Fire Commissioner and Chief of Department George E. Hink, and City Property Commissioner Warren Bendetto. (Right) Philadelphia fire fighters demonstrate a rescue from a smoke chamber during the dedication ceremonies. Ladder and drill tower evolutions were also demonstrated.



Clinton, Iowa, October 8. Bennett Sawmill and Lumber Yard. Smoking by tramps who used the area beneath this sawmill was held to be the cause of this fire that destroyed $30,000 worth of lumber and buildings. The area was not fenced and no watchman service was provided. A workman unloading a freight car nearby discovered the fire but flames spread so rapidly through the wood frame structure that responding fire fighters could only concentrate on exposures.

Jamestown, New York, October 24. Salvage warehouse. (*Jamestown Post-Journal Photo.*) Fire started on the loading platform of this 4-story wood frame building and spread rapidly. Fire fighters protected close exposures with heavy streams and a water curtain but the warehouse was completely destroyed. Loss was estimated at $85,000.

(Left) Utica, New York, October 27. Steel warehouse. (*Associated Press Wirephoto.*) A grass fire involved a storage building and flames spread rapidly to three other unsprinklered structures. Fire fighters responding to second alarm saved other close exposures but loss was estimated at $100,000.

(Right) Boston, Massachusetts, November 2. (*Boston Post Photo from United Press.*) An estimated $100,000 damage resulted when this 5-alarm fire destroyed a wood frame metal clad warehouse on Union Wharf.

FIRES IN THE NEWS

(Right) Wheeling, West Virginia, October 28. (*United Press Photo.*) Prolonged periods of dry weather throughout the country have made the nation's forests susceptible to fires such as this which destroyed 3,000 acres of timber along the Ohio River.

(Left) Council Bluffs, Iowa, October 21. (*Wide World Photo.*) Fire involved a 5,000-gallon gasoline tank in a garage adjacent to this furniture warehouse, then spread through ventilator openings and wood joists under the roofs of the two buildings. Fire fighters could not enter sealed rooms in the warehouse and both buildings were totally destroyed. Loss was estimated at $500,000.

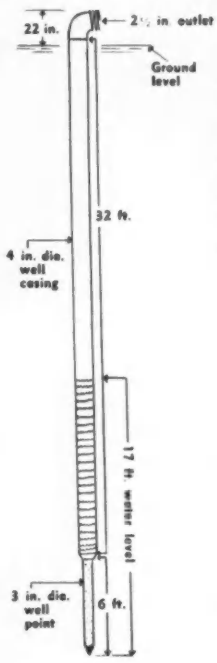
(Below) Waco, Texas, October 9. (*Associated Press Newsphoto.*) Exploding drums of insecticide hindered fire fighters when fire destroyed three wood frame buildings at Blackland Airport. Delayed alarm, a lengthy run for apparatus and insufficient water supply led to an estimated loss of $108,500.

(Below) Akron, Ohio, October 13. (*United Press Photo.*) Sparks from an acetylene cutting torch ignited a pile of baled crude rubber and fire spread from pile to pile (315,000 pounds) and involved 16 nearby automobiles. Fire fighters used a bulldozer and a "clam shel" to separate the burning rubber while 1½-in. lines were used on exposures. Eleven 2½-in. lines were used to blanket the fire area. Loss was estimated at $50,000.

Pumping Through a Well Point

THE Iowa Fire Service Information Bulletin, published by the Engineering Extension Service at Iowa State College, reports an interesting experiment in pumping through a well point conducted by the Columbus Junction Fire Department in cooperation with State Fire Instructor C. F. Lucke. In some communities, not having municipal water supplies, well points have been installed with several connected to a single outlet to provide pumper supply. Performance will vary depending upon local water table conditions. The experiment at Fredonia follows:

Pumping experiment conducted at Fredonia, Iowa Sept. 13, 1951, by Columbus Junction Fire Department and C. F. Lucke, Field Instructor



1. Amount of water available, 175 g.p.m.
2. Inexhaustible amounts available.
3. Water must be drafted.

DATA

500 g.p.m. pumper used
110 lbs. engine pressure
100 ft. 2½ in. line
2 — 50-ft. sections wyed off
2 — ⅜-in. tips (or nozzles)
2 — 5/16-in. nozzles on 1-in booster lines

Nozzle Discharge at 100 lbs. on Pitot Tube

⅜ in.	41.1
⅜ in.	41.1
5/16 in.	28.5
5/16 in.	28.5
	139.2 g.p.m. discharge 4 lines

35.8 g.p.m. reserve could supply another ¼-in. nozzle with discharge of 18.2 g.p.m. or another 5/16-in. nozzle with discharge of 28.5 g.p.m.

Cost of installing and drilling, approximately $325.00 each

Water table must be high enough so as *not* to exceed lift of pump.

This test was conducted for a period of 1 hour with no noticeable depletion of water supply.

Christmas Publications

THE NFPA has produced a folder and a poster which may be used to express Christmas greetings and also to emphasize the need for fire-safe practices during the holiday season.

JH-27b in the monthly poster series features "Sparky" the symbol of home fire prevention and is designed to be folded in thirds to fit into a standard No. 10 envelope. Copies may be obtained in the following amounts: 12 for $1.00; 100 for $5.00; 1,000 for $35; with discounts for larger quantities.

G-24A in the folder series, "Wishing You a Merry Firesafe Christmas" is a folder that also may be used as a mailing enclosure. Fire departments, insurance companies, or other public spirited firms will find this a useful item. Copies may be obtained for $2.00 per hundred; $17.50 per thousand. Write to the NFPA Executive Office, 60 Batterymarch Street, Boston 10, Massachusetts.

Grain Elevator Fire

FIRE started on November 1 in the vicinity of an elevator and man-lift on the second story of this Omaha, Nebraska, grain elevator and mill. Employees delayed sending an alarm while they attempted to use extinguishers on the flames. By the time Omaha fire fighters under Chief Clyde Dunn were called the building was well involved. Fire spread rapidly through unprotected conveyor and elevator shafts in the unsprinklered 3-story frame iron-clad structure. Eight pumpers and two ladder trucks responded to three alarms. Fire fighters used 10 handlines and 2 turret pipes but the grain elevator and mill were destroyed for an estimated loss of $254,000. (*United Press Photo*)

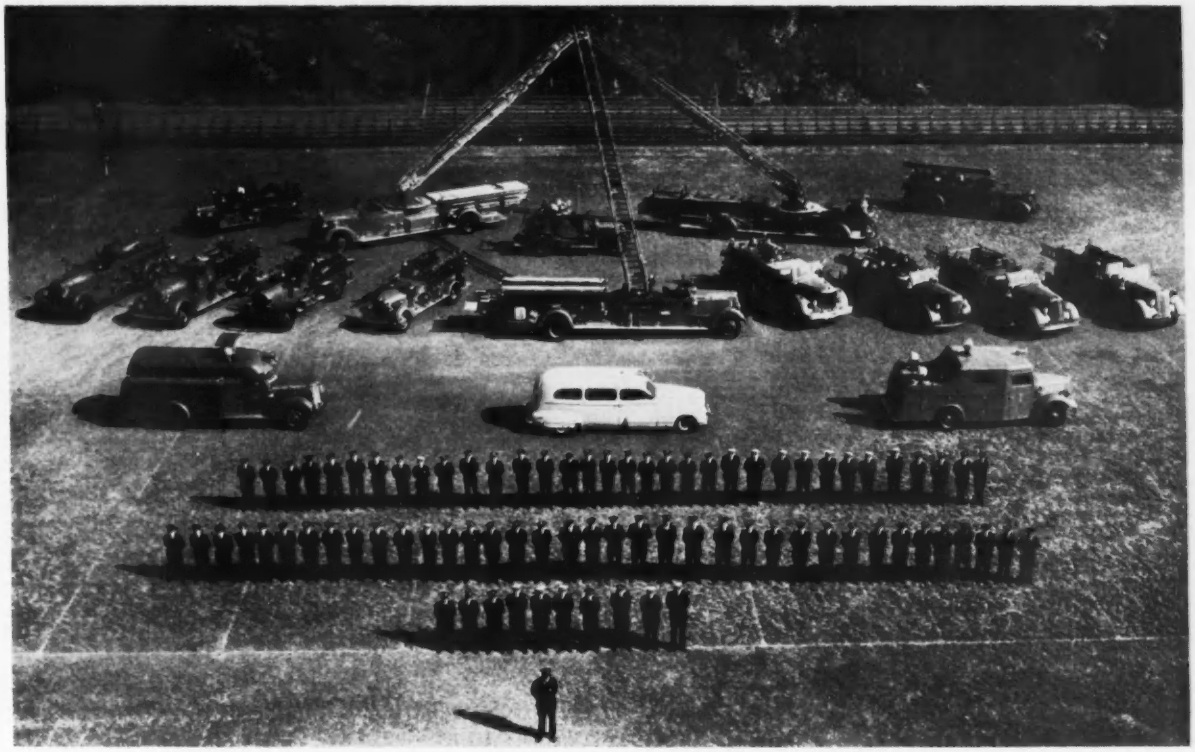
Fire Protection School — Oklahoma A. & M.

OKLAHOMA A. & M. College has been the center for a number of programs of fire protection education from which educational extension work in the fire field has been done throughout the state. It is well-known for the publication of a comprehensive series of manuals for fire department training. It has had a 2-year undergraduate Fire Protection School and, most recently, has undertaken some modest research work.

Last month Mr. H. P. Adams, Director of the School of Technical Training of the Oklahoma Institute of Technology and of the Oklahoma Agricultural and Mechanical College at Stillwater, announced that Professor R. J. Douglas, now in charge of the Fire Protection Department of the School of Technical Training, is to head all fire protection work. George Orgain, who has been active in the extension program and W. Fred Heisler, who has been responsible for the development of the fire department training manuals, will serve under the direction of Professor Douglas. Everett Hudiberg, who has been chief of the Stillwater Fire Department, has also been added to the training staff.

Signals for Volunteers

A NOTE in *The Kentucky City* Magazine, published by the Kentucky Municipal League at Lexington, reports that a new statute permits volunteer fire department members to install sirens and flashing light on their personal automobiles. Permits are issued by local fire chiefs and county judges, and use of the devices for other than fire or emergency calls will result in revocation of permit and a fine of $25-$50.



Fire Department of Upper Darby Township, Pennsylvania

SHOWN above are the members and apparatus of the Upper Darby Township Fire Department, Delaware County, Pennsylvania. This department has four fire companies located throughout its community serving a mercantile and residential area having a population of 90,000. Each fire station is manned by two paid fire fighters who work 12-hour shifts. In addition there are 400 volunteers who have active membership in the department. The Township Fire Chief is appointed each year under a rotation system with each fire company having its turn to provide the chief officer.

The apparatus shown above includes 10 pumpers, 3 aerial ladders, 2 squad trucks and an ambulance. In addition the department has 2 other aerial ladders including a new Seagrave 85-foot tractor-trailer ladder truck. A new 750 gpm Seagrave pumper also has been acquired recently.

The department has two-way radio with receivers in all stations and transmitting and receiving sets on one truck in each fire station. Alarms are received in the police headquarters and sent out by radio, followed by teletype reports as an additional verification.

Upper Darby Township Fire Marshal and Staff
(Left to right) Assistant Fire Marshal Paul W. Bates, Fire Marshal Robert H. Mulholland, and Inspector John H. Farrell.

While Freeport, Illinois, fire fighters attempted to control this estimated $250,000 fire that destroyed eight buildings used for lumber storage, attention of police was attracted by the interested spectator at extreme right of this picture. He was taken into custody and held without charge for questioning. Police stated that they found 14 books of matches on his person. The fire meanwhile spread rapidly and distant location of hydrants limited use of effective streams in the early stages but fire fighters managed to save other close exposures. *(International News Soundphoto.)*

Training a Municipal Fire Department

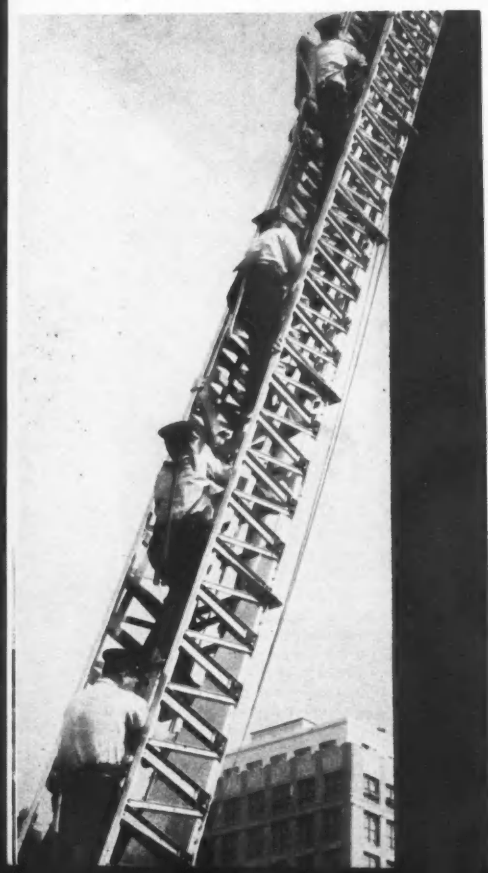
By C. L. Scott, Drillmaster, Memphis, Tennessee Fire Department

From an address given at the 1952 Tennessee Firemen's Association Convention

THE international problems facing this country today definitely indicate a need for well-trained fire departments, especially in the larger cities and coastal areas. If atomic bombs are dropped in this country fire departments that are trained to meet emergencies and to work under pressure and handicaps will be the ones to rally from the shock and restore some semblance of order.

There are other reasons why fire departments must have careful planning for fireman education and training. One is the tremendous expansion of many of our cities. Another reason is the inception of pension plans or retirement of personnel after a pre-determined period of service, which necessitates the replacing of experienced personnel with young men, yet to be tried in the fire service. Still another reason, and a very important one, is the fact that communities spend large sums of money for fire protection.

This places a definite responsibility on a fire department to have adequate training in order to produce the desired efficiency expected by the general public. To be able to cope with this demand a fire department must provide its community with a first-class training branch and a staff of experienced and proven instructors, equipped with the necessary training aids, literature and equipment so important to a program of this type.



THERE are some very important features that must be present in order to conduct a successful training program. The foremost necessity to any training program is the chief of the department. He must be a man of vision, with the ability to recognize the needs of the training branch. To understand the problems of a large-scale program he must *believe* that a training program is the means to a successful end and he must stand ready at all times to accept or reject any phase not practicable.

Secondly, the training branch must be under the supervision of an officer in complete accord with the policies of the chief. He must possess a thorough knowledge of all phases of training procedure and have the ambition to see that the department has the best training possible.

Still another necessity to a well-balanced program is a staff of line officers who understand and approve of fireman education. Probably no other person can cause more confusion at the scene of a fire than a line officer who does not understand the department training procedure. Every line officer should be concerned with the training program from the standpoint of efficiency.

The training branch must be staffed with a complement of well-trained instructors who possess a profound sense of loyalty to their department and enjoyment in their work.

The instructors must be able to talk "up" or "down" depending on the educational level of the fireman. The gift of explanation is rare, and an instructor must be hand-picked to fulfill the obligations of the job. He must be able to see and correct all lost motion and other causes which prevent a program from being a success. He must be on the lookout for men who demonstrate ability to develop into officers or instructors.

The discovery of such men will eliminate to a degree future company officers who might not follow the training program and consequently would be doomed to failure.

THE Memphis Fire Department, under the leadership of Chief John C. Klinck, has established such a training program which is now showing gratifying results.

The training program is organized with the thought of being basically standard yet flexible enough not to handicap the operations with detail.

The probationary training school was well planned before adoption. At present, prior to assignment to this school, a candidate is carefully screened and tested, then is interviewed by the chief of the department together with the deputy chief and drillmaster. If the interview is favorable, the candidate is assigned to the school for a 30-to-40-day period. While attending school, each candidate is carefully observed and graded by a staff of trained instructors.

Besides the routine study of the fundamentals of firemanship, the following important features are carefully observed by the instructor:

1. Physical fitness.
2. Mental alertness.
3. Coordination.
4. Cooperation.
5. Obedience to orders and discipline.

DURING this school training each candidate also serves a tour of duty with an assigned company with rotation occurring weekly. Thus, at the end of the probationary period every trainee has received a thorough introduction to the techniques of the fire service. Upon completion of the probationary class a thorough written examination is

given. Daily grades and the grade of the written examination must average at least 70 in order for candidates to pass the course.

The candidate, if accepted, will then be assigned to a company for fire duty. Needless to say, some do not meet the requirements of the department and are separated from the school pending action of the chief of the department. To emphasize the scope of probationary training, I might mention that we have assigned 117 candidates to companies during the past 20 months with very few eliminations.

ANY successful training program must be carried on regularly and must be intensive. This can be accomplished by company drills in quarters with the aid of the black board and other training aids. In the Memphis Fire Department three days per week have been assigned for company training in quarters, with supervision being provided by the respective district chiefs. As a follow-up program each company is ordered to the drill tower periodically for grading on performance, timing, coordination and teamwork. A complete record is kept of the training progress of all companies.

An adequate training record should contain a profile card of each and every man of the fire department. On this card should be entered all data concerning the individual, including age, date of appointment, promotions, proven qualities, grades, etc. The profile card should be set up to cover the individual's history for 30 years or longer depending on the policy of the department.

The record system cannot be overemphasized. It enables the training branch to follow a man continually and consequently detect both progress and weakness of the training program.

To be effective, a training program must be prolific in the output of literature and good reading material. In Memphis the bulletin method has been proven satisfactory as well as economical.

Fire companies using this system should be provided with some type of loose-leaf binder in which to preserve the bulletins and in a short time each station can have a complete reference book which can be revised quite easily.

In some cases, such as the subject of sprinkler systems, the literature should be preceded with a special school consisting of a demonstration and lecture by a specialized instructor.

For example, with special bulletins on gases and chemicals, a kit of various gas samples can be made to allow the firemen to smell the particular gas while studying the bulletin. A good kit is made by securing several small jars with rubber-lined caps. Half-fill the glass jar with activated charcoal and impregnate the charcoal in each jar with a different gas. The men can then learn to associate the identifying odor with the proper gas.

In conjunction with the study of gases and chemicals, much study is required in the proper selection and use of various masks and breathing devices. In this training lecture work is not nearly so important as practical use. Of course, the physical characteristics of the various masks must be known in order to properly adjust and operate the device. Much of this knowledge can be acquired by the use of a mask under simulated actual fire conditions.

EVERY program has its highlights and we are most proud of our visual education series of training film and fire action scenes that we now produce in Memphis. Members of our fire department are aware of the importance of such visual education.

Most people learn by doing, seeing and hearing. Equipped with the proper teaching aids an inferior instructor can do a superior job while the superior instructor may fail without the necessary equipment that can be seen and handled. Many cities have been utilizing motion pictures in their training programs for years and have shown increased advances both in knowledge and ability.

Motion pictures taken at the fire site are invaluable. After a fire, the personnel of the fire department can be shown the film and the errors can be pointed out, or a discussion conducted to ascertain the best possible method of handling the fire in question. The company personnel can state their views and explain to everyone why a certain hose lay was made or a particular move was indicated.

The visual aid method has many possibilities in the fire service and its importance cannot be overemphasized.

Continual training under proper supervision is essential to the development of good fire fighters. Effective use of water supplies, pumpers, ladders, and hose streams requires repetition of fundamental evolutions so that actions of a group of fire fighters may be co-ordinated into a smoothly operating unit. Typical of such evolutions is the action shown in these pictures taken at the fire training grounds of the Memphis Fire Department. Members are practising the supplying and operation of a 1250 gpm fog gun mounted on a salvage truck. The Memphis Fire Department has had exceptional results with this large caliber fog gun. (See January, 1952, FIREMEN.) Note the large suction hose supplying the 1500 gpm Pirsch pumper, the pressure gages at the intakes of the fog gun which is supplied by three 3-in. lines, and the triple siamese connection below the feet of the operator of the fog gun.

Techniques of Artificial Respiration

By William D. Claudy, M.D.

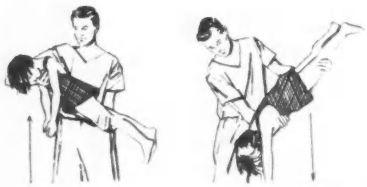
Board of Police and Fire Surgeons, Washington, D. C.

Part III — Conclusion

(Parts I and II of Dr. Claudy's article on artificial respiration appeared in the October and November, 1952, issues of FIREMEN. *Since there has been a large demand for this material from readers, reprints of the complete series will be published sometime in January, 1953.* FIREMEN *will carry an announcement when these reprints are available.*— Ed.)

Mouth to Mouth Respiration.

5. MOUTH-TO-MOUTH RESPIRATION METHOD — The operator expires slowly and with moderate pressure into the mouth (or nose) of the non-breathing patient. He then removes his mouth and allows the patient to expire passively. The cycle is repeated slightly faster than the normal breathing rate. The operator uses one hand to close the patient's nose. With the other hand he may palpate the epigastrium to determine if air is distending the stomach or he may hold the jaw forward to prevent obstruction of the airway. The method is very efficient, requires no apparatus or lifting and is immediately applicable to adults as well as children.



Eve rocking method applied to infant or child.

6. EVE ROCKING METHOD — The rocking method for activation of the inert diaphragm is a manual method when applied to babies or children who can be rocked in the arms of the operator. For adults, a stretcher and fulcrum or a commercial rocking device is required, and the method must be considered mechanical. The patient is rocked alternately 45 degrees in a head-down and 45 degrees in a feet-down position. Movements of the abdominal viscera activate the diaphragm and produce active inspiration and active expiration. This method is frequently and successfully applied to new born infants or small children.

THE question as to the superiority of mechanical versus manual methods frequently arises. Any and all mechanical devices should be considered as adjuncts to, and not substitutes for manual methods since the first few minutes are crucial for resuscitation. In the case of Police and Fire Emergency crews, mechanical devices are usually available nearly as quickly as manual methods (5). Mechanical resuscitators operating usually at maximum pressure of plus 14 mm. of mercury or plus 14 to minus 8 mm. of mercury have certain advantages over the best manual methods. While they produce the same volume of respiration as the most effective push and pull methods, their advantages are:

1. Properly employed resuscitators require less skill than properly performed "push and pull" manual methods.
2. They are not fatiguing.
3. They can deliver pure oxygen.
4. Since the resuscitator mask is applied only onto the patient's face, it can be used where physical manipulation of the body is impossible or would be harmful; as during major surgical procedures, in accident cases with extensive burns, broken vertebrae, ribs and arms, for victims trapped under debris of excavations or overturned vehicles, in small boats and during transportation to a hospital. Further, the resuscitator signals when the airway is obstructed and provides an aspirator.

IN WASHINGTON, D. C., the Fire Department, Metropolitan Police and the U. S. Park Police have been instructed as follows: Push and pull type of manual artificial respiration shall be immediately instituted while a mechanical resuscitator is being prepared or when the resuscitator is not available. In the case of rescue squads and harbor police boats responding with resuscitators, one man on the first arriving vehicle is detailed to commence manual artificial respiration while the resuscitator is being transported to the victim and prepared for operation. Manual efforts are not discontinued until the mask is in place and can actually be seen to be functioning properly.

Any resuscitator bearing the stamp of approval of the Council on Physical Medicine and Rehabilitation of the American Medical Association may be considered satisfactory. There seems to be no essential performance difference between those using alternating positive and negative pressures and those using positive pressure alone.

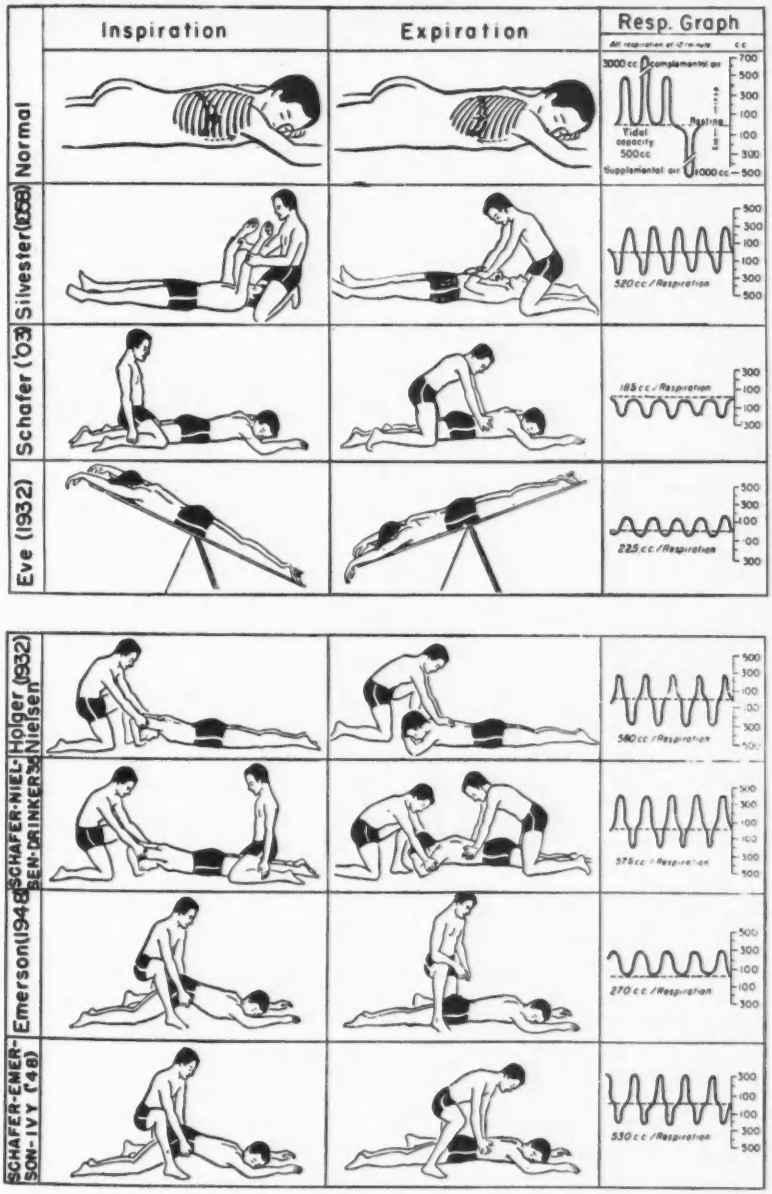
One disadvantage of mechanical resuscitators is their weight. The use of the Kreiselman bellows type hand resuscitator avoids this. This instrument designed in 1943 for emergency use by the Armed Forces weighs 2 lbs., can readily be transported to the most inaccessible locations and gives an excellent air exchange. Since it is manually operated, it can be used as an assistor when voluntary respirations commence to return.

Civil Defense (6) has stimulated interest in artificial respiration. The use of nerve gas will necessitate wide spread application of artificial respiration. Manual methods must be of the push and pull type, since the gas paralyzes muscular structures. Mechanical resuscitators will not be available in sufficient quan-

tity should this agent be used in any concentration against civilians. Unless removed from the contaminated atmosphere, both the victim and the rescuer must wear masks capable of filtering out the gas during manual resuscitation efforts. A canister attachment on the hand bellows resuscitator is now under consideration.

While the average rescue squad is familiar with the common indications for artificial respiration, *i.e.*, drowning, electrocution, etc., there are many other less well-known causes which are equally important. These may result from:

1. Respiratory depression.
   - *a.* Overdoses of drugs or anesthesia.
   - *b.* Injuries or diseases of the brain.
   - *c.* Paralysis of respiratory muscles due to poliomyelitis, spinal cord injury, nerve gas paralysis, too high spinal anesthesia.
2. Respiratory obstruction.
   - *a.* Foreign bodies in the respiratory tract including false teeth, food, candy, chewing gum, nuts, small toys, etc.; mucus, pus, blood, vomitus, water as in cases of drowning.
   - *b.* Dust, dirt, earth or other debris filling the mouth or respiratory tract after an explosion.
   - *c.* Falling back of the tongue into the pharynx during depressed conditions as in coma, anesthesia, drug or alcohol poisoning.
   - *d.* Laryngospasm (spasm of the voice box) due to irritants, foreign bodies or vapors.
   - *e.* Edema (swelling) of the larynx (voice box).
   - *f.* Tumors pressing against air passages.
   - *g.* External constriction of the neck as in strangulation (suicidal or homicidal) hanging, or lynching.
   - *h.* External compression of the chest preventing its movement, as a victim compressed against fallen debris or compression of a child by an adult body, *e.g.*, a parent attempting to protect a child.
3. Effects of poisonous gases.
   - *a.* Carbon monoxide.
   - *b.* Carbon dioxide.
   - *c.* Smoke from accidental fires.
   - *d.* Irritant gases in industrial accidents.
   - *e.* Irritant gases in warfare.
4. A combination of respiratory arrest and obstruction, *e.g.*, overdose of sedative drugs causing respiratory arrest and also relaxation of the pharyngeal muscles (in the back of the mouth) resulting in falling back of the tongue into the throat.
5. Open wounds of the chest.
6. Electric shock.
   - *a.* Industrial or household accidents.
   - *b.* Lightning.



Inspiratory and expiratory phases of normal respiration, Eve rocking method and manual methods of artificial respiration with pneumographs produced by each.

CERTAIN important criteria must be present if efforts at resuscitation are to be successful:

1. The patient must still be alive; the dead are never resuscitated. If respiration and heart action have ceased, the best manual or mechanical methods are useless. However, individuals who have reached the stage of apparent death (4) can be resuscitated even though they have ceased to breathe and neither pulse nor heart action can be detected by ordinary means. Physicians are frequently unable to tell the exact instant that death occurs.

(*Continued on page 20*)

Group Training in Fire Department Administration

By Orin S. Nolting, Assistant Director, International City Managers' Association

CHIEF Forrest Lucas of the Dayton, Ohio, Fire Department (NFPA Member Department), his top officers, and the fire chiefs of several cities have been meeting regularly for group discussions on problems of fire department administration. These discussions are based on the application of techniques and principles set forth in the latest edition of the manual entitled "Municipal Fire Administration," prepared by the Institute for Training in Municipal Administration which is conducted by the International City Managers' Association.

The Institute supplies a list of questions for each discussion period. Summaries of answers to these questions are prepared by a member of the group and submitted to the Institute for grading and comment. Similar group training programs are currently under way in a number of smaller cities such as Winter Park, Florida, and El Cajon, California. In past years many other cities such as Pontiac, Michigan, and Oakland, California, have conducted training for fire officers with real success. Currently, individual enrollments include firemen in cities in 14 states and one foreign country.

Los Angeles firemen have a unique opportunity for training. In that city the University of Southern California offers a complete fire training program, with duplicate courses on alternate days so that men may attend on their days off.

"Municipal Fire Administration," written by some of the foremost authorities in the fire field and published by the International City Managers' Association, is widely used in fire departments both as a reference manual and as a training text. It is now being translated into Japanese on request of Fire Chief Takao Shioya of Tokyo and will be used in teaching fire administration to Japanese fire fighters in all cities in Japan.

Under the group plan four or five or as many as 20 officers meet together regularly (say once a week) to discuss one chapter in the course. A leader or moderator keeps the discussion pointed in the right direction. He may be a member of the fire department, or a specialist in the personnel department, or possibly an instructor in a local high school or college. He is not necessarily an expert in fire administration but he knows how to get men to learn from each other by talking together purposefully. Discussion in the fire course is based on lesson questions prepared by the Institute for Training. The questions aid the men to appraise and evaluate local operations and problems. The Institute grades the lesson papers of these groups and awards a certificate to each member who successfully completes a final examination.

The Institute's instructors are competent men in the fire field. One is Chief John Klinck of Memphis, Tennessee, who has a great deal to do with the national fire college held each year in Memphis. Others are Wesley Rowell, Training Officer of the Los Angeles County Fire Department, and Joseph T. Deichman of the Chicago Fire Department. These men devote considerable time outside their regular duties to grading the lesson papers of individual and group enrollees in the fire course. They are themselves graduates of the course. During the past 12 years the Institute has awarded graduation certificates to 250 firemen.

Chief John C. Klinck, Memphis, Tennessee, Fire Department. (See story on page 12 of this issue.)

Battalion Chief Wesley Rowell, Training Officer, Los Angeles County Fire Department, Los Angeles, California.

Lieut. Joseph T. Deichman, Chicago, Illinois, Fire Department.

Detailed information concerning individual enrollment or group training in fire administration may be secured on request to the Institute for Training in Municipal Administration, 1313 East 60th Street, Chicago, Illinois.

Joe Fetters Appointed Chairman of NFPA Firemen's Training Committee

CHIEF Joseph I. Fetters, Administrative Assistant, Adult Education and Extension Service, University of Missouri, Columbia, has been appointed Chairman of the NFPA Committee on Firemen's Training succeeding W. A. "Art" Ross, who has served as Chairman for eight years. Mr. Ross has found it necessary to resign because of a new assignment in the U. S. Office of Education which is not related to fire service training

Chief Fetters has long been a member of the NFPA Committee on Firemen's Training and is now directing the firemen's training program in Missouri after many years as Director of firemen training in Nebraska.

Rhode Island Firemen Salute Willard Hall

MORE than 200 members and guests of the Rhode Island State Firemen's Association, with Governor Dennis G. Roberts present, attended a dinner meeting at Chepatchet, Rhode Island, on October 8, to salute retiring President Willard Hall of Harmony. U. S. Congressman John E. Fogarty, formerly an active member of the Harmony Volunteer Fire Department stated, "Mr. Hall has done more for the Rhode Island fire service during the past 25 years than any other individual."

Toastmaster, Irving "Sam" Black, fire chief of the U. S. Rubber Company in Providence, related numerous improvements in fire fighting techniques pioneered by Mr. Hall while serving for more than 20 years as Chairman of the Engineering Committee of the Woonasquatucket Firemen's League. These accomplishments included improved pumper-relay techniques, fire service use of wetting agents, and better forest fire fighting methods by volunteer departments.

Editor Warren Y. Kimball of NFPA FIREMEN Magazine told of more than 20 years of cooperation from Mr. Hall and other Rhode Island volunteers in developing standards for rural fire protection now accepted nationally. The Tri State Firemen's Meet (Connecticut, Massachusetts, Rhode Island) was initiated 10 years ago by Willard Hall. Chief Lewis A. Marshall of Providence called attention to the importance of fire prevention and Fire Prevention Week.

In responding President Hall indicated that a state-wide fire prevention program should be one of the major activities of the Rhode Island State Firemen's Association.

New Film on London Blitz Fires

A NEW film entitled "Twenty-ninth (29th) Blitz" has been put together to assemble the best shots of the great incendiary raid on London of December 29, 1940. This film consists of two reels of 16 millimeter sound film, the prints of which can be purchased for $57.50 or obtained on a rental basis for $2.00. Write British Information Services, 30 Rockefeller Plaza, New York 20, N. Y.

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The Fireman's Law Book

CHARLES W. BAHME, Captain of the Dangerous Chemicals Detail of the Los Angeles City Fire Department, has published two books which will be useful to NFPA members interested in their subject matter. One of these is entitled "The Fireman's Law Book" which is prepared as a legal guide for persons in the fire services. Captain Bahme is an attorney-at-law, a member of the California bar, and has made a special study of the statutes which affect firemen and fire departments.

While his book is slanted to reflect California legal practices, it contains a comprehensive discussion of individual and municipal liability of firemen and fire departments and discusses certain legal matters relating to the work of fire prevention bureaus and other phases of fire department operation.

The Fireman's Law Book is 154 pages, 8½ by 11 inches, mimeographed, and may be obtained for $3.00 per copy from Charles W. Bahme, 8631 Olin St., Los Angeles 34, Calif.

Captain Bahme's other book just published is entitled "Handbook of Disaster Control" and brings together, under one set of covers, a useful reference paper on the subject. Captain Bahme reports that the material was assembled for use in connection with a course he is to present in the School of Public Administration at the University of Southern California.

The text includes a discussion of different types of disasters and other matters of organization and operation in disaster control. The book is 100 pages, mimeographed, and costs $2.50. Order from Charles W. Bahme, 8631 Olin Street, Los Angeles 34, California.

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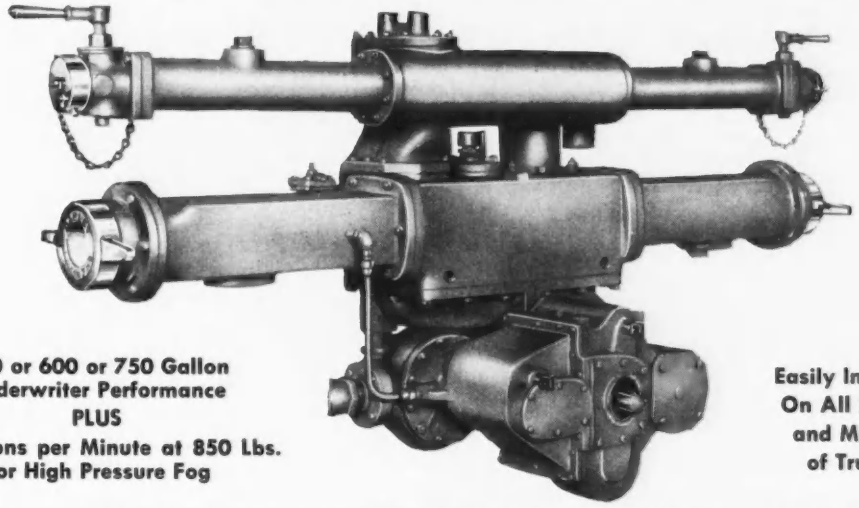

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Techniques of Artificial Respiration

(Continued from page 15)

The dictum "don't give up" is very applicable. It is doubtful whether any individual submerged or otherwise completely deprived of air and oxygen can survive more than 8 minutes, but it is rarely possible to estimate accurately the time of submersion. Hence attempts at resuscitation should always be undertaken. Even when death is obvious, it is frequently a matter of kindness and good public relations for rescuers to attempt resuscitation. Close family members are apt to resent a casual pronouncement of death and will become emotionally upset at the omission of efforts to fan even the faintest spark of life.

2. An adequate airway must be secured and maintained. Neither mechanical nor manual methods, no matter how carefully applied, can succeed if the wind pipe is obstructed. The tongue should be pulled well forward, the head hyperextended and the jaw and tongue structures pulled and held forward. An airway should be inserted over the tongue unless such an effort should induce gagging. If this occurs neither the airway nor artificial respiration is usually needed although the inhalation of oxygen and other first-aid methods directed at rest and prevention of shock are still indicated. Dentures, tobacco and chewing gum should be removed from the mouth as well as dirt, vomitus, mucus or other foreign matter. In most cases, the aspirators supplied with resuscitators are not as effective as a gauze wipe on the end of fingers inserted well into the mouth and pharnyx. Since the Venturi tubes must be small to conserve oxygen, they are easily obstructed.

3. Individuals dying from brain hemorrhage, heart disease, pneumonia and other clinical conditions are not benefited by artificial respiration. Poliomyelitis of the bulbar type is a notable exception and life may be preserved by the use of either manual artificial respiration or mechanical resuscitation until a respirator is available. While respirators are invaluable for this purpose, they have no place in the armamentarium of first-aid squads treating asphyxiation accidents. Oxygen by inhalation is helpful in heart cases.

4. Speed in commencing artificial respiration of any type is of utmost importance. In the presence of massive pulmonary edema resuscitation will fail. In the presence of moderate edema (fluid in the lungs) immediate artificial respiration will provide oxygen during the stage which is most crucial for resuscitation of the flagging heart. Attempts at "draining the lungs" should *not* be made before artificial respiration has been commenced. Where there is fluid in the lungs, maintaining the patient in a slightly head-down position may be helpful in allowing drainage and will also assist in combating shock.

5. Manual artificial respiration hand type resuscitators may be supported by the use of oxygen inhalators. While authorities differ as to whether pure oxygen, or oxygen carbon-dioxide mixtures should be used, the consensus favors pure oxygen. Most victims of asphyxia already have an excess of carbon-dioxide present in the blood stream. The questionable stimulating effect of carbon-dioxide is not needed when artificial respiration is being given. In addition carbon-dioxide is a powerful gas requiring considerable knowledge and experience to use. Its use should be restricted to trained professional personnel.

Conclusions

1. Artificial respiration is a field where professional and lay personnel alike have much to contribute. Their efforts should be coordinated and complementary.

2. Speed in applying artificial resuscitation is of utmost importance. Seconds count. Persistence and a "don't give up" attitude is vital.

3. Other factors being equal, mechanical resuscitators are superior to manual methods, but manual methods should never be delayed while awaiting the arrival of resuscitators.

4. The arm-lift back-pressure method of Holger-Neilsen, adopted by the Red Cross, is highly effective. Amongst Police, Fire and Rescue Squads, when adequate trained man-power is available, the hip-lift back-pressure method of Gordon

should be used since it gives greater air exchange.

5. Varying field conditions may require various methods. Rescue teams should be familiar with at least the following methods:

a. Arm-lift back-pressure (Holger-Neilsen).

b. Hip-lift back-pressure (Gordon).

c. Arm-lift chest-pressure (Silvester).

d. Mouth-to-mouth (or mouth to nose) insufflation.

6. An adequate airway is vital to the success of any method.

7. Asphyxiated patients should receive prompt anti-shock treatment. When voluntary respirations return, oxygen by inhalation or the use of the hand resuscitator as an assistor is valuable.

8. The indications for artificial respiration are many and rescue squads should be familiar with them.

9. Attempts to "drain the lung" are useless. If massive pulmonary edema is present, they will fail. If edema is moderate, immediate artificial respiration is more important than futile drainage attempts. A head-low position is helpful.

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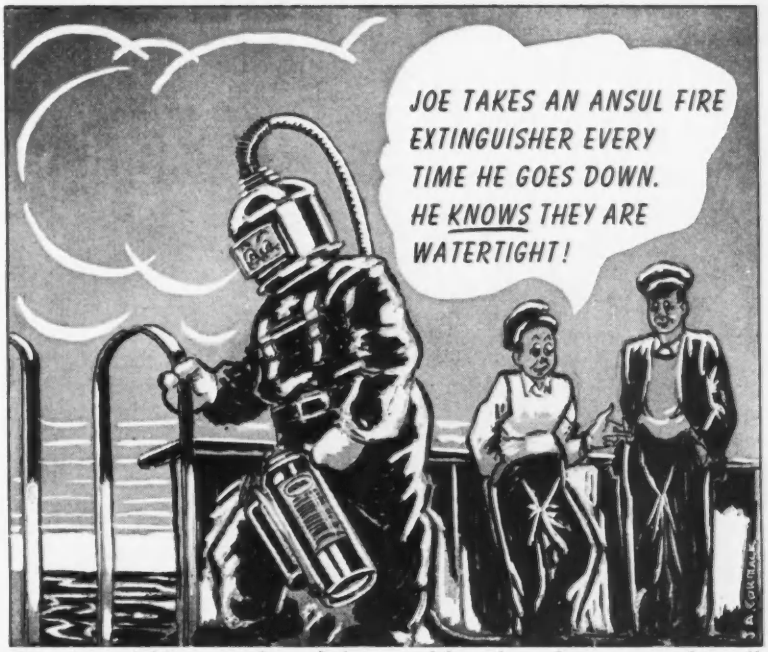
8. First Aid, Surgical and Medical — Cole & Prestow — Appleton Century Co. — 1951.

(We wish to thank Dr. A. S. Gordon, the editors of the Journal of the American Medical Association and "What's New," Abbott Drug Company publication, for their permission to use the illustrations that appeared in this series. — Ed.)



For dependable operation of dry chemical fire extinguishers under all conditions, watertight construction is critically important. All Ansul 20-B and 30-B Models are of water-tight construction.

Many thousands of these extinguishers have been exposed to all types of adverse weather conditions. Yet, to our knowledge there has been not one case of faulty operation due to entry of water or atmospheric moisture.

ANSUL CHEMICAL COMPANY • MARINETTE, WISCONSIN

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Wishes You A

Merry Fire Safe Christmas

and Prosperous New Year

SERVING MUNICIPAL AND INDUSTRIAL

FIRE PROTECTION CONSTANTLY SINCE 1892

POWHATAN BRASS and IRON WORKS

RANSON, WEST VIRGINIA

Phones 93 & 94 Charles Town West Virginia

Established 1892

Fairborn, Ohio, Emergency Bus

TO MAKE the best use of a limited amount of funds which they had collected, members of the Fairborn, Ohio, Fire Department pooled their ingenuity and labor to convert this bus into a supplementary emergency ambulance. Picture (upper right) shows the interior of the unit as seen from the driver's seat. In addition to generous compartment space there are stoves, a sink, lighting and power equipment and first aid kits. Stretchers (at left) allow for patients to be transported comfortably. At lower right Chief Bud Warner of Fairborn is shown at the rear of the vehicle.

The Fairborn Fire Department operates in Bath Township and was formed by combining the fire departments that formerly served the towns of Osborn and Fairfield, which were consolidated as Fairborn in 1948. The Department also has six pumpers and a 2200-gallon tank truck. Apparatus is equipped with two-way radio operating on the combined fire and police system. The Fire Department has 30 men trained in first aid for emergency and rescue work.

REAL FIRE-FIGHTING POWER
—*Plus* PRACTICAL ECONOMY

You get BOTH with the BARTON-AMERICAN UA FRONT-MOUNTED PUMP

LOOKING FOR THE MOST fire-protection for the money — *without* sacrifice of top-quality in materials and workmanship? Then you'll want to investigate the unique advantages you can get with a Barton-American UA Type Front-mounted Pump!

THIS NEW BULLETIN — (just off the press) — shows *point-by-point* the reasons why a powerful, precision-built, gear-driven UA Pump costs less to install on any chassis you select. It shows how you can fight fires with the famous Barton Super-Fog Guns while the truck is in motion — with either high pressure fog or straight streams.

IT SHOWS HOW you can carry more water or equipment — on a chassis that's better balanced for the road — than with other pumps. And it gives details on our exclusive Service-Pump Plan — an extra assurance that your community will *always* have continuous fire protection! There are many other points to consider, so —

just off the press — GET YOUR COPY!

Write Today For Your Copy of New UA Pump Bulletin 8330-A.

AMERICAN-MARSH PUMPS

BATTLE CREEK MICHIGAN

CANADIAN PLANT:

American-Marsh Pumps (Canada) Ltd. • Stratford, Ontario

Does Your Fire Department Sponsor a Boy Scout Troop?

AT THE 24th Fire Department Instructors Conference in Memphis, Tennessee, last January, one of the feature addresses was given by Commander Thomas J. Keane, Director of Civic Relationships of the Boy Scouts of America. During the talk Commander Keane mentioned that an additional 20,000 boys could become scouts each year if fire companies throughout the country would take the responsibilities of sponsoring Boy Scout Troops.

For the next FDIC, which is scheduled to be held in Memphis, February 24–27, 1953, it is hoped that an adequate summary of such fire department sponsorship of Boy Scout activities may be presented.

Richard E. "Dick" Vernor, Chairman of the FDIC and Manager, Fire Prevention Department, Western Actuarial Bureau, Chicago, Illinois, would like to hear from any fire organizations who have taken an active part in promoting the work and organization of the Boy Scouts. Readers of FIREMEN who desire to supply such information may write to Mr. Vernor at the above address or may send the information to FIREMEN Magazine, NFPA Executive Office, 60 Batterymarch Street, Boston 10, Mass.

Shown above are two pictures recently forwarded to FIREMEN. Top picture shows a group of Boy Scouts studying knot-tying at a special one-day course for Scouts which is held at the Pennsylvania Fire School.

Bottom picture shows M. D. Gathercole, Instructor, Fire Commissioner's Office, Saskatchewan, Canada, conducting a class for Boy Scouts. He instructed more than 500 boys in five days at a fire school held in Prince Albert.

Globe DURABLE FIREMEN'S Suits

when you invest in quick-hitch suits buy the BEST— buy GLOBE!

Before you buy ANY firemen's clothing, see the GLOBE line. We'll let you be the judge of their many practical features including the new Globe Neoprene* Interlinings. You'll find them durable; they'll give you more real lasting wear and protection than any suit on the market. Clip out the corner of this ad and get the facts. Do it now, today.

Gentlemen: Dept. FM

Please send me, without obligation, your FREE catalog and samples of materials used in the Globe Suits. Also the name of the Globe Dealer nearest me.

Name.....

Address.....

GLOBE MANUFACTURING CO.
PITTSFIELD, N. H.

*Made with 100% DuPont Neoprene

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You bet I specify MIDWESTERN Protective Clothing ...my men deserve the BEST!

PROTECTION
COMFORT
SERVICE

There is no substitute for the extra protection, built-in comfort and longer wear you get by specifying Midwestern clothing. In our vast selection of rubber materials you will find the type of fabric exactly suited to your climate and needs. You can count on the softness and flexibility of the high-grade materials used to meet your most exacting requirements for lasting comfort and rugged service.

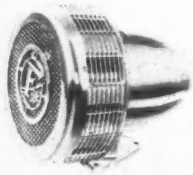
Due to government requirements for Midwestern Protective Clothing, prompt delivery will be assisted if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous MACKINAW Coats

more **LIGHT**
more **SOUND**
more **SAFETY** with

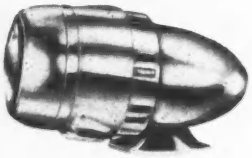
FEDERAL SIGNALS

Federal warning signals are daily more indispensable to more departments, and it's plain to see why — Federal has a complete line — a signal for every purse and purpose.



CLASS Q

4 models of the loudest and most powerful vehicle siren on the market. Unequalled and in a class by itself.



CLASS C

8 models of super coaster sirens; low pitch and very powerful for extremely severe traffic conditions.

CLASS 70

8 models of double tone sirens with coaster feature.

CLASS 60

4 models of heavy duty sirens for all emergency duties.

CLASS E-W

8 models equal to anything offered in the industry. Effective sirens at moderate prices

CLASS V

3 models for the personal cars of Volunteer Firemen.

THE BEACON RAY

America's most famous emergency vehicle light. 360° protection. Nothing equals it.

THE PROPELLO RAY

The rotating beam light long popular on fire apparatus.

THE SCATTER RAY

A 360° flashing light at a very low price. For all emergency purposes.

Write for catalog today!

FEDERAL ENTERPRISES, Inc.
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8717 S. State Street **Chicago 19, Ill.**

"Rescue and First Aid Digest"

A 50-page "pocket-size" publication with the above title has been issued by the Center for Safety Education, New York University. Fire department members, particularly members of rescue squads, should find some interesting and informative features in the 5¼ by 7¼-in. digest.

A great deal of the material is devoted to the suggested organization and responsibilities of rescue squad and other first aid units. Several of the articles provide information on emergency treatments, such as artificial respiration, and treatments for burns and poisons. Civil defense rescue operations and training are also described.

Copies of the publication may be obtained from the Center for Safety Education, Division of General Education, New York University, Washington Square, New York 3, New York. Single copies may be obtained for 35 cents each; for quantity purchases of more than 10 copies price is 30 cents per copy.

•

British Fire Research 1951

THE annual report of the British Joint Fire Research Organization for 1951 summarizes a number of items in which there have been developments during the year in Great Britain. One series of tests on vaporizing liquid extinguishers confirms the U. S. Army and Air Force experiments with trifluorobromomethane and tetrafluorodibromoethane which have been reported in NFPA publications. Continuing work has been done on how various materials ignite by heat radiation and on protection of steel columns in building construction with substantially lighter concrete aggregate (vermiculite and gypsum). Studies of the validity of fire tests with small scale models have been started.

The report of the British Fire Research Board for the year 1951 is available in a 50-page pamphlet from Her Majesty's Stationery Office, for two shillings. Members in the United States may order this report through the British Information Services, 30 Rockefeller Plaza, New York 20, N. Y., for 50 cents per copy.

SMOTHER the FIRE FAST

with John Bean High-Pressure Fog

JOHN BEAN *high-pressure fog*

FIRE-FIGHTER

John Bean high-pressure fog has triple fire fighting action — it cools, it isolates, it smothers the flames. One gallon of water converted to John Bean high-pressure fog has the fire-quenching capacity of 10 gallons discharged as a conventional stream. The Bean pump develops 850 pounds pressure to deliver 650 pounds at 60 gallons per minute at the nozzle. Protect your community with a John Bean Fire-Fighter.

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John Bean Division
P.O. Box 145
San Jose, California

ORIGINAL HIGH-PRESSURE FOG FIRE-FIGHTER

Can be mounted on most standard truck chassis

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORP.

EVENLY MATCHED...

for purpose and quality

BADGE and CROWN, both are prized possessions, yet standards of value are measured in different ways. To the king his crown is a possession of untold value and historical significance. To you, your badge is without question a prized possession that reflects personal achievement for you. Your badge has a special meaning to you — it stands for honesty, authority, and devotion to duty.

If your badge is a BLACKINTON BADGE you realize true quality and you know that your badge is the finest. But if you are one of the few not wearing a BLACKINTON BADGE you've missed a lot in personal satisfaction. Ask to see BLACKINTON BADGES the next time your equipment supplier calls. He will gladly show you the true quality and outstanding appearance of BLACKINTON BADGES.

BLACKINTON BADGES sparkle with quality.

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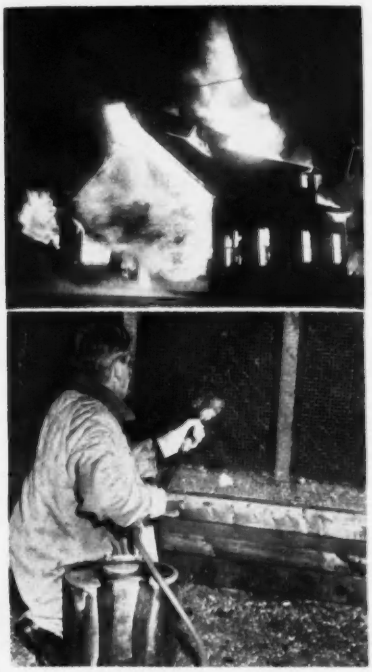
V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS.

Blackinton Police and Fire Badges are sold throughout the United States and Canada, exclusively through authorized equipment suppliers.



Bear Barely Escapes

CHIEF Arthur A. Girard of the North Adams, Mass., Fire Department reports an interesting rescue job performed by members of his department when fire involved a wood frame building (top photo) which housed a dairy bar and souvenir store. Fire started when lightning struck the building during a heavy gale and flames were completely beyond control by the time North Adams fire fighters made the seven-mile run to the site.

Within 20 feet of the involved building was a caged six-year-old bear. During the fire the excitement and heat (which was singing its fur) so disturbed the animal that it almost broke out of its cage. Police were prepared to use submachine guns when fire fighters took charge.

Bottom picture shows how water was sprayed into the cage with an Indian back-pack pump. The bear responded by turning its singed portions into the cooling spray and then putting its mouth near the nozzle and gulping the water. Meanwhile volunteer onlookers set up a barricade of picnic tables between the cage and the involved building.

The dairy barn was completely destroyed, but Chief Girard reports: "The bear is alive and well and is now at another establishment on the Mohawk Trail. Who said animals are dumb?"

Safeguard OUR NATION'S INDUSTRY

Dependable fire protection for defense and civilian industries is vital, and the fire signaling system is the first line of defense against fire. Insist on GAMEWELL Fire Signaling Equipment — it has proven reliable, efficient, and durable.

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The GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
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Better Hose Care--- with CIRCUL-AIR

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THE AIR CONDITIONING
FIRE HOSE DRYER

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. NO OTHER DRYING METHOD IS SO FAST—SO ECONOMICAL—SO EASY TO USE.

ACCEPTED • APPROVED • RECOMMENDED

ACCEPTED as the standard drying medium in over 1500 fire departments — APPROVED by the leading testing laboratories — RECOMMENDED by fire hose manufacturers and Fire Chiefs "all over America."

PATENTED

If you are building, send for free copy of "Fire Station Design"

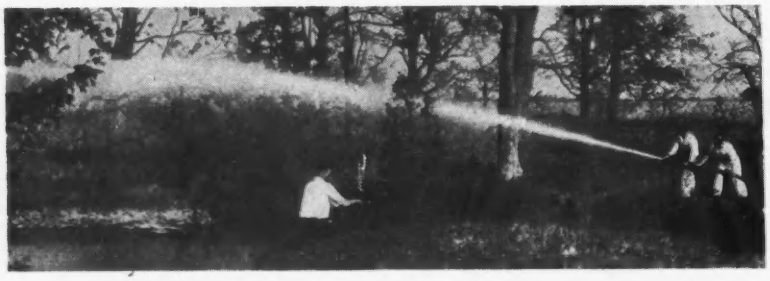
NEW HOSE DRYING MANUAL TELLS HOW TO DRY, STORE AND CONSERVE FIRE HOSE

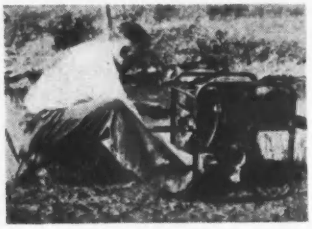
May we send you one?

THE CIRCUL-AIR CORPORATION

575 East Milwaukee Detroit 2, Michigan

Quick-Starting Portable . . . HALE FZZ





The FZZ will supply from draft 60 GPM at 90 lbs. and 150 GPM at 30 lbs. Starts easily and quickly in all types of weather.

Firefighters are pleased with the quick-starting ability of the Hale type FZZ Portable Pumping Unit — an especially valuable feature in freezing weather. The 4-cycle single cylinder 8¼ H.P. engine ensures ease and speed in starting . . . and plenty of power to the direct-connected Hale Pump. NOTE: Discharge adapter available for 2½-inch fire hose.

Many FZZ owners use a Hale 2½" adapter for pumping through a long single 2½" line to a fire distant from source of water. They then wye at the fire and into two 1½" lines providing two capable fire streams.

Write for FZZ Folder. Let us know if your Company wants a demonstration.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

FIRE PUMPS IN ALL STANDARD CAPACITIES

Membership Report

DURING 1952 NFPA Fire Department Membership has shown a steady increase. In January of this past year there were 21,483 fire fighters who subscribed to FIREMEN through NFPA membership. They represented 1,655 fire departments and volunteer fire companies.

Now there are 24,312 fire fighters who subscribe to FIREMEN and who represent 2,004 fire departments and volunteer fire companies who have NFPA Fire Department Membership.

The increase in membership has been steady from month to month and can be attributed to the efforts of many NFPA members who have personally contacted non-member fire departments, distributed NFPA applications and explained the benefits of such membership. To those persons who have thus cooperated in strengthening the Association the NFPA Executive Office expresses its gratitude. To all NFPA members the NFPA Staff extends the best of wishes for a fire-free 1953.

NFPA Welcomes:

Alaska: Spenard Volunteer Fire Department, Spenard.

California: Novato Fire District, Novato.

Illinois: Dupo Fire Protection District, Dupo; Roselle Volunteer Fire Department, Roselle.

Maryland: The Corringanville Volunteer Fire Company, Incorporated, Corringanville; Mount Airy Volunteer Fire Company, Mount Airy; Water Witch Fire Company, Port Deposit.

Massachusetts: Plympton Fire Department, Plympton.

New York: East Glenville Volunteer Fire Department, Scotia.

Ohio: West Millgrove Community Volunteer Fire Department, West Millgrove.

Oregon: Harrisburg Volunteer Fire Department, Harrisburg.

Oklahoma: Miami Fire Department, Miami.

Pennsylvania: Peebles District Volunteer Fire Company, Allison Park; Wissahickon Fire Company, Ambler; McKinley Fire Company No. 1, McKinley.

Texas: Greggton Volunteer Fire Department, Greggton.

Virginia: Bailey's Cross Road Volunteer Fire Department, Alexandria.

West Virginia: Petersburg Volunteer Fire Company, Petersburg.

Wisconsin: Mukwonago Volunteer Fire Department, Mukwonago.

Kills Oil & Petrol Fires with SPEED & CERTAINTY

★

Nicerol is supplied in heavy gauge steel drums designed for quick release and clean pouring.

★

Nicerol can be used in any type of mechanical foam or air foam apparatus. In this case a base injection type in-line inductor is being operated.

★

The secret of Nicerol effectiveness lies in the small bubble formation. It creates a tough, efficient blanket. 3 gallons of Nicerol and 100 gallons of water will produce over 1,100 Imperial gallons of foam.

★

The above gasoline and oil blaze was extinguished in a matter of seconds by a normal mix of Nicerol Foam Compound.

Meet the hazard of fire with Nicerol, the foam compound that kills any oil or gasoline fire quickly and absolutely. Nicerol is a concentrate, producing a heavy type foam of closely-knit small bubbles which form a tough, vapour-tight blanket over the surface of burning oil or gasoline. It is characteristic of Nicerol Foam that it flows with the fire and is highly resistant to flash-back or re-ignition. It can be used successfully in any type of mechanical foam or air-foam apparatus — is equally effective with salt water or fresh and can be stored for years without deterioration.

TRADE ENQUIRIES INVITED

For further particulars, samples, catalogues, etc.

The Royal Navy and the Royal Air Force use it and so do Oil Companies, Fire Equipment Manufacturers, Civil Air Lines, several Commonwealth and Foreign Government departments, and Fire Brigades throughout the world. What better recommendation?

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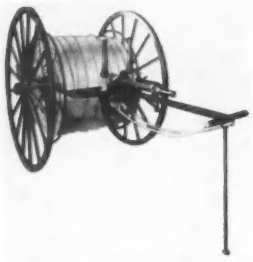
Telephone: Lisburn 2027 *Telegrams: Nicerol, Lisburn*

INDEX TO ADVERTISERS

	Page
American District Telegraph Company	6
American-Marsh Pumps, Inc.	22
Ansul Chemical Company	21
John Bean Division, Food Machinery and Chemical Corporation	25
V. H. Blackinton & Company, Inc.	26
Cairns & Brother, Inc.	4
Carpenter Mfg. Company	20
Circul-Air Corporation	28
W. S. Darley & Company	19
Federal Enterprises, Inc.	24
Gamewell Company	27
Globe Manufacturing Company	23
Hale Fire Pump Company	28
Harodikes Incorporated	30
Howe Fire Apparatus Company	30
Mack Manufacturing Company	3
Metcalf Brothers & Company	5
Midwestern Mfg. Company	23
Nicerol Limited	29
Powhatan Brass & Iron Works	21
Pyrene Mfg. Company	18
Rockwood Sprinkler Company	2
Russell Uniform Company	20
D. B. Smith & Company	17

What's New In Fire Equipment?



Fire Hose Carts

Fire hose carts with all-welded construction have been developed by Wirt & Knox Mfg. Company, Philadelphia 32, Pennsylvania. The carts offer a compact means of storing hose lines, fire axes, crowbars, nozzles and other tools for fire fighting in industrial plants, institutions, and similar occupancies. They are available with wood or steel wheels and have tubular steel or bar steel frames in different types and sizes. Write to manufacturer at the above address for further details.

●

Engine Pre-Heater for Cold Weather Starting

An electric pre-heater for Diesel or gasoline engines is being produced by the Kim Hotstart Manufacturing Company, West 917 Broadway, Spokane 11, Washington. The device plugs into an electrical outlet and through percolator-like action keeps the engine warm for instant starting, even when vehicles are stored outside in cold weather. Descriptive literature may be obtained by writing to the manufacturer.

●

Buyer's Guide for Fire Protection Equipment

A new, indexed, 40-page Buyer's Guide for portable fire extinguishers and fire fighting accessory equipment has been published by The Fyr-Fyter Company of Dayton, Ohio. The guide illustrates a complete line of fire protection equipment and describes applications, special features, construction details, and pertinent specifications. Helpful reference material is also included. The guide is available in bound catalog form or loose leaf sheets with a convenient file jacket. Copies will be sent without charge upon request to manufacturer at the address shown above.

●

New Foam Compound

Pyrene Manufacturing Company, Newark, New Jersey, has developed a new foam for use against fires in alcohol, gasoline, benzine and other flammable liquid fires. Called "Alcohol Resistant Foam Compound" the new product is a protein-base material containing special ingredients which make the foam stable in the presence of alcohol. Recommended concentration is 6 parts of the compound to 94 parts of water. Further details may be obtained from the manufacturer.

●

Fire Extinguisher Cart

General Detroit Corporation and General Pacific Corporation have designed a combination fire extinguisher cart equipped with three types of extinguishers. The "Handy Fire Dolly" is a mobile unit easily wheeled by one person. Complete information is available from The General Detroit Corporation, 2272 East Jefferson Avenue, Detroit 7, Michigan, and The General Pacific Corporation, 1501 East Washington Boulevard, Los Angeles 21, California.

WATER when and where you want it!

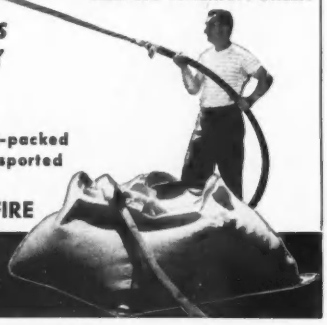
with HARODIKES
Portable Canvas Water Tanks
THE ECONOMICAL AND EFFICIENT WAY TO CARRY AND STORE WATER.

ON THE JOB - ON THE SPOT
KEEPING AMERICA GREEN

EXCLUSIVE FEATURES
- Self Supporting
- Easily Back-packed
- Ideal for Relay Pumping
- Easily Transported

Available in 150 & 300 gallon sizes

A WATER SUPPLY AT THE SCENE OF THE FIRE



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HARODIKES INCORPORATED
NORTH DIGHTON, MASSACHUSETTS

HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary, and Piston Pumps supplied
HOWE FIRE APPARATUS COMPANY, 1406 West 22nd Street, Anderson, Indiana

Index to Firemen, Volume 19—1952

	Month	Page
A-Bomb Shelter for Existing Buildings	Aug.	40
Accidents En Route, edit	March	7
Aircraft Crash Rescue Problems	Aug.	14
Airplane Crashes, Elizabeth, N. J.	April	12
Airport Fire Safety	Sept.	19
Airport Hangars, fire experience	April	28
Alaska, Forest and Range Control Program	April	10
Alsip, Chief Retires	May	10
Annual Meeting, NFPA	July	12
Arson Investigators Institute at N.Y.U.	March	22
Arson Investigators Seminar, Illinois	Feb.	24
Artificial Respiration		
Methods of	Oct.	14
Techniques of	Nov.	14
Techniques, Conclusion	Dec.	14
Assignment Plan, Emergency	Oct.	27
Automatic Sprinkler Heads	Sept.	13
Baby Sitters Bulletin	May	26
Barns Can Be Saved	July	17
Bogan, Chief "Bob" Honored	May	17
Booster Tank Wagons	Jan.	9
British Portable Pumps	July	10
Canada, Hose Thread Standardization	July	14
Chart of Mutual Aid Equipment, Greene County, Ill.	May	11
Chief Treadwell Retires	Oct.	15
Cistern for Rural Fire Fighting	May	10
Civil Defense:		
A-Bomb Shelter in Existing Buildings	Aug.	40
British Fire Defense Exercises	July	10
Directory of State Fire Coordinators Edit	Oct.	26
	Sept.	9
Emergency Pipe Lines	March	9
Fire Apparatus	Feb.	16
Fire Storms	Oct.	10
Fire Services	Jan.	11
Guide for Buildings Exposed to A-Bombs	Sept.	36
Ontario Fire Conferences	Nov.	26
Oregon Fire Defense Plan	Feb.	13
Radiation Monitoring	March	24
On TV	Feb.	28
Classification of Lightning Rods and Fire Escapes by Washington, D. C.	Feb.	26
Dangerous Fuel Oil Installation	Aug.	24
Deaths and Property Damage from Fire — 1951	Feb.	24
Deaths from Oil Stove Fires	Sept.	10
Dwelling Inspections, West Coast	Jan.	24
Emergency Assignment Plan	Oct.	27
Emergency Bus Ambulance	Dec.	22
Emergency Pipe Lines	March	9
Fires:		
Akron, Ohio, Rubber Piles	Dec.	9
Atlantic City, N. J. Hotels	Feb.	5
Bakersfield, Calif. Oil Refinery	Sept.	9
Baltimore, Md. Auto Shop	June	26
Belding, Mich. Foundry	June	26
Benton, Ill. Business Block	Mar.	17
Boston, Mass., Dock Warehouse	Dec.	9
Boston, Mass. Warehouse	Aug.	15
Brooklyn, N. Y. Coal Bunker	Aug.	30
Brooklyn, N. Y. Tenements	Aug.	30
Burbank, Calif. Studio	July	16
Cedar Rapids, Iowa LPG Cylinders	Aug.	15
Chicago, Ill. Chemicals	Nov.	7
Cincinnati, Ohio, Factory	March	17
Clinton, Iowa, Lumber Yard	Dec.	9
Corpus Christi, Tex. Oil Tanks	July	16
Council Bluffs, Iowa, Garage	Dec.	9
Crete, Ill. Grandstand	April	27
Crawfordsville, Ind. Business Block	April	15
Dalles City, Ore. Grain Elevator	Oct.	9
Effingham, Ill. Store	March	17
El Paso, Tex. Garage	June	26
Elwyn, Pa. School	April	9
Fargo, N. Dak. Hotel	Feb.	14
Freeport, N. Y. Boat	Nov.	22
Harvey, N. Dak. Mercantile	March	17
Hilliards, Ohio Propane	March	17
Houston, Tex. Refinery	July	16
Hutchinson, Kan. Church	Sept.	20
Jamaica, N. Y. Plane Crash	May	15
Jamestown, N. Y. Furniture Co.	Sept.	32
Jamestown, N. Y., Warehouse	Dec.	9
Jersey City, N. J. Hospital	Aug.	21
Lawrence, Mass. Factory	Jan.	13
Longmont, Col. Mill	Jan.	8
Los Angeles, Calif. Studio	Sept.	32
Louisville, Ky. Warehouse	March	17
Louisville, Ky. Fairgrounds	Nov.	22
Manhattan Beach, N. Y. Housing Project	April	15
Memphis, Tenn. Rubber Plant	Jan.	10
N. Abington, Mass. Dwelling	March	17
New York, N. Y. Freighter	Sept.	32
New York, N. Y. Loft Building	July	16
New York, N. Y. Store	May	15
Ocean City, N. J. Hotel	Nov.	22
Odessa, Tex. Oil Warehouse	Aug.	15
Omaha, Neb., Grain Elevator	Dec.	9
Philadelphia, Pa. Hotel	April	15
Philadelphia, Pa. Sulphite Storage	Nov.	22
Phoenix, Ariz. Palm Trees	May	7
Piper City, Ill. Corn Produce	April	15
Pittsburgh, Pa. Mortuary	Nov.	23
Pittsburgh, Pa. Restaurant	Sept.	9
St. Urbain, Que. Conflagration	Aug.	15
Scranton, Pa. Restaurant	Aug.	15
South Gate, Calif. Pottery Mfg.	May	15
Tulare, Calif. Fairgrounds	Nov.	22
Utica, N. Y., Warehouse	Dec.	9
Vancouver, B. C. Docks	July	16
Waco, Tex., Airport Warehouses	Dec.	9
Washington, D. C. Sodium Chlorate	May	15
West Brookfield, Mass. Barn	July	17
West Hartford, Vt. Barn	Oct.	7
Wheeling, W. Va., Forests	Dec.	9
Williamsport, Pa. Die Mfg.	April	15
Fire Alarm Boxes	Feb.	8
Fire Control Program in Montana	April	31
Fire Deaths and Property Damage in 1951	Feb.	24
Fire Departments:		
Adams Township, Ohio	April	30
Albion, Ill.	May	16
Arlington, Tex.	Aug.	26
Baltimore County, Md.	June	8
Basking Ridge, N. J.	May	16
Bethpage, L. I., N. Y.	April	30
Boston, Mass.	Aug.	12
Bridgenorth, Ont.	Feb.	20
Cedar Falls, Iowa	May	9
Chemainus, B. C.	Feb.	13
Chula Vista, Calif.	Aug.	26
Clayville, N. Y.	Oct.	19
Columbus, Ohio	Aug.	20
Cordova, Alaska	Aug.	26
Escalon, Calif.	Oct.	19
Fort Wayne, Ind.	Sept.	18
Greenwich, Conn.	Aug.	28
Horseheads, N. Y.	Jan.	26
Huntington, W. Va.	June	17
Indianapolis, Ind.	Aug.	26
Lakewood, N. Y.	April	14
Malverne, N. Y.	Oct.	19
Matawan, W. Va.	Aug.	26
Memphis, Tenn.	Sept.	10
Middlebury, Conn.	April	30
Mt. Holly, N. J.	July	23
Muncie, Ind.	July	30
Newark Township, Ohio	Aug.	16
North Adams, Mass.	Feb.	13
Ontario, Calif.	Feb.	13
Oregon City, Ore.	Feb.	13
Orlando, Fla.	July	22
Panama, Okla.	Feb.	13
Rice Lake, Minn.	July	14
San Francisco, Calif.	Jan.	9
Santa Ana, Calif.	Jan.	17
Seaford, Del.	Jan.	17
Tacoma Park, Md.	May	19
Upper Darby Twp., Pa.	Dec.	11
Vina Del Mar, Chile	Jan.	17
Warsaw, Ind.	May	16
Wayne, N. J.	June	27
Willow Grove, Pa.	Aug.	26
Fire Experience of Airport Hangars	April	28
Fire Experience, U. S. Govt.	May	18
Fire Fighters, Indian	Aug.	38
Fire Foto Contest Winners	June	12
Fire Hazard Control, Short Course	March	26
Fire Hose, Testing	March	12
Fire Hose Threads, Canadian	June	31
Fire Instructors' Conference, N. Y.	July	11
Fire Instructors' Qualifications	Oct.	27
Firemen's Home Addition	Aug.	14
Firemen Injured When Rope Breaks	Sept.	22
Firemen's Training, State and Provincial — 1951	Nov.	8
Fire Patrol, Huntington, W. Va.	June	17
Fire Police, Horseheads, N. Y.	Jan.	26
Fire and Police Departments, Combined	Jan.	10
Fire Prevention:		
Award	June	31
In Britain	Feb.	22
Contest Winners, 1951	Feb.	6
Fort Wayne, Ind.	Sept.	18
Michigan State College	April	26
Railway Car	Aug.	32
Fire Protection in Ohio, Legal Aspects	Sept.	28
Fitness for Fire Fighting	Oct.	7
Fire Training Films:		
Fire's the Enemy	April	24
Fog Techniques in Extinguishment of Oil Well Fire	Feb.	28
Los Angeles Training Films	July	28
Water vs. Fire	Feb.	31
You Bet Your Life	Sept.	40
Fire Training, Lawton, Okla.	July	31
Fog:		
"Attacking and Extinguishing Interior Fires"	May	7
Fog Application at Church Fire	Sept.	20
Fog Application at Grain Elevator Fire	Oct.	9
Fog Nozzle Tests	Sept.	16
Large Caliber Fog Guns at Memphis, Tenn.	Jan.	10
"Studies of Fog Nozzles"	Oct.	20
Forest and Range Control in Alaska	April	10
Furnace, Home Made	Nov.	29
"Efas" Fire Alarm System	Jan.	18
Expedient Water Supply	June	22
Emergency Traffic Signal Controller	Oct.	29
Gas Mask Bill, N. Y. Veto	June	32
Georgia State Firemen's Assoc.	Aug.	40
Grain Elevator Fire	Oct.	9
Hose Lay, Mattydale	March	19
Hose, Testing	March	12
Hose Threads, Canadian	June	31
Hose Threads, Canadian	July	14
Hose Sizes, Suggested	Aug.	16
Hose, Splicing Burst	Sept.	17
IAFC Conference	Oct.	18
IAFC Report on Chiefs' Salaries	Oct.	7
Indian Fire Fighters	Aug.	38
Inspections, Muncie, Ind.	July	30
Inspections, West Coast	Jan.	24
Ladder Loading	Aug.	28
Ladder Truck, Rebuilt	July	24
Lawton, Okla. Fire Training	July	31
Legal Aspects of Fire Protection in Ohio	Sept.	28
Let's Stop These Fire Deaths	March	8
Lightning Rods, Washington Classifies	Feb.	26
Making a Good Job of It:		
Getting Effective Streams from Limited Water Supplies	Feb.	10
How to Remember Approximate Flows	Sept.	30
Suggestions for Better Nozzle Tip Sizes	Oct.	12
Making a Rural Fire Safety Survey	June	12
Maryland Awards Shoulder Patches	Oct.	28
Massachusetts Law Revised	Nov.	24
More About Hose Sizes	Aug.	18
Muncie, Ind. Inspections	July	30
Municipal Fire Protection	Aug.	19
Mutual Aid Equipment, Greene County, Ohio	May	11
New Jersey Fire School	Sept.	29
New York Fire Department	June	6
New York Governor Vetoes Gas Mask Bill	June	32
Operating Pumpers:		
Getting Most from a Pumper	Feb.	21
Maintaining Pressure	March	18
Operating Pumper Smoothly	Sept.	14
Pressure and Capacity Ratios	June	14
Providing Proper Pressure	Jan.	22
Relief Valves and Pressure Governors	July	18
Suction or Compound Gages	April	16
Palm Tree Fires	May	7
Philadelphia Training School	Dec.	8
Portable Pump, British	July	10
Portable Pumps, Sizing Up	May	12
Power for Pumps and Pumpers	Nov.	16
Proposed Pumper Evolutions	June	16
Pump Installation at International Airport	Sept.	13
Pumper, Tacoma Park, Md.	May	19
Qualifications for Fire Instructors	Oct.	27
Radio Network, Wayne County	May	11
Radio, Philadelphia Mobile	March	27
Radio System, Charles County, Md.	Oct.	29
Rebuilt Ladder Truck	July	24
Rescue and Squad Trucks	Jan.	12
Rescue Equipment, Columbus, Ohio	Aug.	30
Rescue Squads Should Move Patients	Nov.	20
Rescue Work at Philadelphia Fire	Nov.	32
Rural Cistern for Fire Fighting	May	10
Safety in Fire Box Numbers	Feb.	8
San Francisco's Booster Wagons	Jan.	9
Sidelights on Municipal Fire Protection	Aug.	19
Signal, Traffic Controller	Oct.	29
Sparky Becomes New Symbol	June	30
Specifications for Motor Fire Apparatus, NFPA	Sept.	40
Splicing Burst Hose	Sept.	17
Sprinkler Heads, Improved	Sept.	13
State Aid Program in Ontario	May	10
State and Provincial Firemen's Training — 1952	Nov.	8
St. Louis Ladder Truck	July	24
Suggestions for Good Stretches	Jan.	14
Traffic Signal Controller	Oct.	29
Training in Fire Dept. Administration	Dec.	16
Training a Municipal Fire Department	Dec.	12
Training Staff at Iowa State College	Jan.	23
Tri-State Firemen Meet	Oct.	16
Unusual Water Supply	June	22
U. S. Govt. Fire Experience	May	18
Utilizing Water for Farm Fires	April	11
Wayne County, N. Y., Radio Network	May	11
West Coast Dwelling Inspections	Jan.	24
Winners of 1951 Fire Prevention Contest	Feb.	6
Yearbook, Municipal — 1952	July	14

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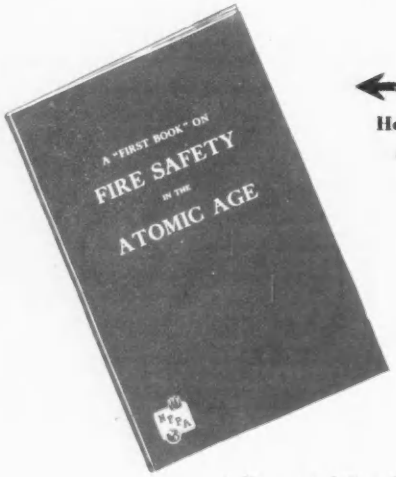

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